

CITY OF KINGSTON STORMWATER MANAGEMENT PLAN

MAY 2010

SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems
GP-0-10-002



**SPDES Permit for Stormwater Discharges
from
Municipal Separate Sewer Systems
GP-0-10-002**

Document Prepared by:

Office of the City Engineer
City Hall
420 Broadway
Kingston, NY

STORMWATER MANAGEMENT PLAN

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STORMWATER MANAGEMENT PLAN

INTRODUCTION

The City of Kingston Stormwater Management Plan has been developed to comply with the New York State Department of Environmental Conservation General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (GP-0-10-002).

The Stormwater Management Plan is based on the Federal Stormwater Phase II rule, issued in 1999, which requires municipal separate storm sewer system (MS4) owners and operators, in U.S. Census-defined urbanized areas, to develop a Stormwater Management Program. There are six program elements designed to reduce the discharge of pollutants to the maximum extent practicable. The program elements, titled Minimum Control Measures, include:

1. Public Education and Outreach
2. Public Involvement / Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Stormwater Management
6. Pollution Prevention / Good Housekeeping for Municipal Operations.

Each Minimum Control Measure and the Best Management Practices that have been implemented to maintain compliance with the NYSDEC GP-0-10-002 General Permit are described in the plan. For each

Best Management Practice, responsibilities to achieve and sustain compliance are clearly defined. Refer to the Local Law for Stormwater Management and Erosion and Sediment Control and the Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems. These laws were adopted by the City of Kingston in 2007.

This Stormwater Management Plan should be updated on an annual basis in order to take into consideration the latest technologies and information to maintain compliance with the NYSDEC GP-0-10-002 General Permit.

GENERAL DEFINITIONS AND REQUIREMENTS

Best Management Practices (BMPs) - Activities or structural improvements that help reduce the quantity and improve the quality of stormwater runoff. BMPs include public education and outreach, treatment requirements, operating procedures, and practices to minimize contamination of runoff, spillage or leaks, sludge or waste disposal, or drainage from materials storage areas.

Clean Water Act - Amendments incorporated into the Federal Water Pollution Control Act in 1972 to establish water quality standards and to create the National Pollutant Discharge Elimination System to protect the waters of the U. S. by regulating the discharge of pollutants from point source discharges and municipal separate storm sewer systems.

Combined Sewer System – A sewer system designed to convey both sanitary wastewater and stormwater.

Detention Pond – Pond that stores a volume of water for a given period of time and then discharges to downstream waters.

Discharge – An outflow of water from a stream, pipe, ground water system or watershed.

Ecosystem – all of the plants and animals in an area that interact to make up the local environment.

Erosion – the overall process of the transport of material on the earth's surface including the movement of soil and rock by agents such as water, wind, or gravity.

Groundwater – all of the water contained in void space beneath the earth's surface.

Heavy Metals - Metals such as zinc, copper, lead, mercury, chromium, cadmium, manganese, nickel, molybdenum and silver that, even in low concentrations can be toxic or lethal to humans, animals and aquatic life.

Illicit Discharge - The term refers to any discharge to an MS4 that is not composed entirely of stormwater unless authorized via an NPDES permit or otherwise excluded from regulation. Thus, not all illicit discharges are illegal or prohibited.

Industrial Waste - Unwanted materials from an industrial operation. It may be liquid, sludge, solid, or hazardous waste.

Maximum Extent Practicable (MEP) – a water quality standard that applies to all MS4 operators under NPDES permits. The standard has no exact definition, as it was intended to be flexible to allow operators to tailor their stormwater programs to their particular site.

Municipal Separate Storm Sewer Systems (MS4) - Areas with a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains) that are not a combined sewer or part of a publicly owned treatment system and are owned or operated and regulated by a municipality or authorized agency. MS4s may be small, medium or large with the medium or large MS4s being principally determined by population size.

Non-Point Source Pollutants (NPS) – pollution coming from many diffuse sources whose origin is often difficult to identify. This pollution occurs as rain or snowmelt travels over the land surface and mobilizes pollutants such as fertilizer, pesticides, and chemicals from cars. This pollution is difficult to regulate due to its origin from many different sources. These pollutants enter waterways untreated and are a major threat to aquatic organisms and people who fish or use waterways for recreational purposes.

National Pollutant Discharge Elimination System (NPDES) – the EPA's regulatory program to control the discharge of pollutants to waters of the United States.

Notice of Intent (NOI) - An application to notify the permitting authority of a facility's intention to be covered by a general permit. This exempts a facility from having to submit an individual or group application.

Nutrients - The term typically refers to nitrogen and phosphorus or compounds containing free amounts of the two elements. These elements are essential for the growth of plant life, but can create problems in the form of algal blooms, depletion of dissolved oxygen and pH changes in streams and other water bodies when higher concentrations are allowed to enter drainage systems and lakes.

Ordinance - A law based on state statutory authority developed and approved by a governmental agency to allow them to regulate the enforcement of criteria contained within the specific law and to invoke sanctions and other enforcement measures to ensure compliance with the criteria.

Outfall - the point where a sewer or drainage discharges into a receiving waterway, or where stormwater flows from one municipal jurisdiction into another.

Point Source Pollution - pollution coming from a single, definable source, such as a factory.

Retention Pond - Pond that stores a volume of water without allowing it to discharge downstream.

Runoff - any drainage that leaves an area as surface flow.

Sanitary Sewer - an underground pipe system that carries sanitary waste and other wastewater to a treatment plant.

Sediment - material derived from the weathering of rock such as sand and soil. This material can be detrimental to aquatic life and habitats if an excessive amount flows into rivers and ponds.

Site Plan - a geographic representation of the layout of buildings and other important features on a tract of land.

State Pollutant Discharge Elimination System (SPDES) - New York State's regulatory program to control the discharge of pollutants to waters of the United States.

Storm Drain - any drain which discharges directly into the storm sewer system, usually found along roadways or in parking lots.

Storm Sewer - an underground pipe system that carries runoff from streets and other surfaces.

Stormwater - rain water or snow melt runoff, and surface runoff and drainage.

Stormwater Management - any measure associated with the planning, maintenance, and regulation of facilities which collect, store, or convey stormwater.

Stormwater Pollution Prevention Plan (SWPPP) - A plan developed by a facility or entity that thoroughly evaluates potential pollutant sources at a site and selects and implements appropriate best management practices that are designed to prevent or control the discharge of pollutants in stormwater runoff.

Surface Runoff - the flow of water across the land surface that occurs when the rainfall rate exceeds the ability of the soil to absorb the water. Also occurs on impervious surfaces, such as parking lots, where water cannot infiltrate at all.

Surface Water - any water that remains on the earth's surface, such as ponds, rivers, streams, impoundments, wetlands, oceans, etc.

Total Maximum Daily Load (TMDL) - a regulatory limit of the maximum amount of a pollutant type that

can be released into a body of water in a twenty-four hour period without adversely affecting water quality.

Tributary – a stream which drains into another larger body of water.

Urbanized Area (UA) - a land area consisting of one or more central places and the adjacent densely settled surrounding area (urban fringe) that together have a residential population of at least 50,000 and a minimum average population density of at least 1,000 people per square mile.

Watershed – a geographic area in which water drains into a certain stream or river and flow out of the area via that stream or river. All of the land that drains to a particular body of water. Also known as a drainage basin.

Waters of the US – includes both groundwater and surface waters such as wetlands, lakes (including dry lakes), rivers, streams (including intermittent streams, ephemeral washes and arroyos), mudflats, sandflats, sloughs, wet meadows, playa lakes, natural ponds, and man-made impoundments.

Wetlands – an area of land where part of the surface is covered with water or the soil is completely saturated with water for a large majority of the year. Wetlands are also natural stormwater control areas, since they filter out pollutants and are able to retain large amounts of water during storm events.

LIST OF COMMONLY USED ABBREVIATIONS

BMPs – Best Management Practices
CWA – Clean Water Act
MCM – Minimum Control Measure
MEP – Maximum Extent Practicable
MS4 - Municipal Separate Storm Sewer System
NOI – Notice of Intent
NPS – Non-Point Source Pollutants
NPDES – National Pollution Discharge Elimination System
NYSDEC – New York State Department of Environmental Conservation
POC – Pollutant of Concern
SPDES – State Pollution Discharge Elimination System
SOP – Standard Operating Procedure
SWMP – Stormwater Management Plan
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
USACOE – United States Army Corps of Engineers
USEPA – United States Environmental Protection Agency
UST – Underground Storage Tank

SECTION 1 - PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

1.1 Description of Minimum Control Measure

The Public Education and Outreach minimum control measure consists of Best Management Practices (BMPs) that focus on the development of educational materials designed to inform the public about the impacts that stormwater discharges have on local water bodies. The educational materials contain specific actions as to how the public, as individuals or collectively as a group, can participate in reducing pollutants and their impact on the environment. The Public Education and Outreach program and BMPs, in combination, are expected to reach all of the constituents within the MS4s permitted boundary. The target pollutant sources are construction site runoff, impacts from new and re-development projects, illicit discharges and local/regional Pollutants of Concern (POCs).

1.2 General Permit Requirements

An MS4 must, at a minimum:

- a. Identify POCs, waterbodies of concern, geographic areas of concern, target audiences;
- b. Develop and implement an ongoing public education and outreach program designed to describe to the general public and target audiences:
 - i. the impacts of stormwater discharges on waterbodies;
 - ii. POCs and their sources;
 - iii. steps contributors of these pollutants can take to reduce pollutants in stormwater runoff; and
 - iv. steps contributors of non-stormwater discharges can take to reduce pollutants (non-stormwater discharges are listed below);
- c. Develop, record, periodically assess, and modify as needed, measurable goals; and
- d. Select appropriate education and outreach activities and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.

Non-stormwater discharges are defined in the MS4 General Permit (GP-0-10-002) Part I.A.2 and include:

- Waterline flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl space and basement sump pumps
- Lawn and landscape watering runoff provided that all pesticides and fertilizers have been applied in accordance with the manufacturer's product label
- Water from individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges

- Residual street wash water
- Discharges or flows from fire fighting activities
- Dechlorinated water reservoir discharges
- Any SPDES permitted discharge

1.3 Methodology for Compliance with Permit Requirements

The City of Kingston has developed many of the BMPs necessary for this MCM. These have included brochures, posters, webpage, education packages, and a display for community events. These BMPs will be updated by the City of Kingston on an as needed basis.

1.4 Best Management Practices

1.4.1 Stormwater Pollution Prevention Brochures

Description / Methodology

Provide public education brochures addressing stormwater pollution prevention for the general public, target businesses/activities and schools.

The brochures are available on the City of Kingston webpage along with information for businesses, municipalities, schools, and the general public to request additional brochures or download the brochures directly.

Annual Compliance Requirements

City of Kingston

Distribute relevant brochures to targeted businesses and general public.

Provide additional brochures to local MS4s upon request.

Provide additional brochures to businesses, schools, and the general public upon request.

Stormwater Management Officer

Display public education materials in City hall.

Inventory existing stock of brochures and replenish as needed.

Maintain records of number of educational materials distributed.

1.4.2 Public Education Posters

Description / Methodology

Prepare public education posters that can be placed within municipal buildings, libraries, and schools.

Annual Compliance Requirements

1.4.3 Webpage

Description / Methodology

Develop a webpage designed to educate the public on the impacts of stormwater runoff on local waterbodies.

Develop a list of subjects for inclusion and discussion on the webpage based on consideration of the following subjects:

- Citizen reporting under the illicit discharge and construction programs.

- Water quality impacts of stormwater runoff to local water bodies.
- Steps the public can take to reduce stormwater pollution.
- Public involvement programs.
- Update and post new information to the webpage as needed.

Annual Compliance Requirements

City of Kingston

Update and maintain the webpage on an as needed basis.

Stormwater Management Officer

Update and maintain the MS4 webpage as necessary.

1.4.4 K-12 Education Packages

Description / Methodology

Develop age appropriate materials for distribution to local educators in order to foster an early age respect for the environment. Distribution will include information describing environmental education services available to local educators regarding stormwater quality issues. Education materials will be updated as necessary to maintain consistency with current standards and to reflect any input received from school administrators and teachers.

Annual Compliance Requirements

City of Kingston

Update education materials as needed

Distribute education materials to all schools and maintain records of the distribution.

1.4.5 Public Education Display for Community Events

Description / Methodology

Public education displays, addressing general stormwater pollution prevention and rain gardens, have been developed for use by MS4s at their community events. The displays are prepared and maintained by the City of Kingston. A number of displays addressing the two topics are available. A reservation system mitigates potential conflicts between municipalities requesting the display for the same time period.

The displays consist of a poster board, public education materials, the Enviroscope watershed model..

Annual Compliance Requirements

City of Kingston

Conduct outreach and education at regional community

Maintain records pertaining to the use of the public education display(s)

1.5 Required Reporting

At a minimum, the permittee shall report on the items below:

- a. list education / outreach activities performed for the general public and target audiences and provide any results (for example, number of people attended, amount of materials distributed, etc.);
- b. permittees performing the education and outreach activities required by other MCMs (listed below), may report on those activities in MCM 1 and provide the following information

applicable to their program:

- IDDE education activities planned or completed for public employees, businesses, and the general public, as required by Part VII.A.3 of GP-0-10-002;
- employee pollution prevention / good housekeeping training planned or completed, as required by Part VII.A.6 of GP-0-10-002 ; and

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SECTION 2 PUBLIC PARTICIPATION / INVOLVEMENT

2.1 Description of Minimum Control Measure

The Public Involvement/Participation minimum control measure consists of Best Management Practices (BMPs) that focus on involving the local public in development and implementation of the SWMP. Compliance with State and local public notice requirements will facilitate public participation. The BMPs include a number of practices designed to seek public input on the SWMP and Annual Report accomplishments. They also describe specific activities that encourage public participation. The target audiences for the public involvement program are key individuals and groups that may have an interest in the particular BMPs and the general public located within the permitted boundary.

2.2 General Permit Requirements

An MS4 must, at a minimum:

- a. Comply with the State Open Meetings Law and local public notice requirements, such as Open Meetings Law, when implementing a public involvement / participation program;
- b. Develop and implement a public involvement/participation program that:
 - identifies key individuals and groups, public and private, who are interested in or affected by the SWMP ;
 - identifies types of input the permittee will seek from the key individuals and groups, public and private, to support development and implementation of the SWMP and how the input will be used; and
 - describes the public involvement / participation activities the permittee will undertake to provide program access to those who want it and to gather the needed input. The activities included, but are not limited to a water quality hotline (report spills, dumping, construction sites of concern, etc.), stewardship activities like stream cleanups, storm drain marking, and volunteer water quality monitoring;
- c. Local stormwater public contact.
Identify a local point of contact for public concerns regarding stormwater management and compliance with this general SPDES permit. The name or title of this contact and the telephone number must be published in public outreach and public participation materials.
- d. Annual report presentation.
Below are the requirements for the annual report presentation:
 - i. prior to submitting the final annual report to the Department, by June 1 of each reporting year (see Part V.C.), present the draft annual report in a format that is open to the public, where the public can ask questions about and make comments on the report. This can be done:
 - at a meeting that is open to the public, where the public attendees are able to ask questions about and make comments on the report.
 - This may be a regular meeting of an existing board, such as planning, zoning or the town board. It may also be a separate meeting, specifically for stormwater. If multiple permittees are working together, they may have a group meeting (refer to Part V.C.2); or
 - on the internet by:
 - making the annual report available to the public on a webpage;
 - providing the public the opportunity to provide comments on the internet or otherwise; and

- making available the opportunity for the public to request an open meeting to ask questions about and make comments on the report. If a public meeting is requested by 2 or more persons, the permittee must hold such a meeting. However, the permittee need only hold a public meeting once to satisfy this requirement.

ii. provide public notice about the presentation, making public the following information when noticing the presentation in accordance with the State Open Meetings Law or other local public notice requirements:

- the placement of the annual report on the agenda of this meeting or location on the internet;
- the opportunity for public comment. This general SPDES permit does not require a specified time frame for public comments, although it is recommended that permittees do provide the public an opportunity to comment for a period after the meeting. Comments received after the final annual report is submitted shall be reported with the following year's annual report. Permittees must take into account those comments in the following year;
- the date and time of the meeting or the date the annual report becomes available on the internet; and
- the availability of the draft report for prior review prior to the public meeting or duration of availability of annual report on the internet;

iii. the Department recommends that announcements be sent directly to individuals (public and private) known to have a specific interest in the permittee's SWMP;

iv. include a summary of comments and (intended) responses with the final annual report. Changes made to the SWMP in response to comments should be described in the annual report; and

v. ensure that a copy of the SWMP plan is available for public inspection;

e. Develop, record, periodically assess and modify as needed measurable goals; and

f. Select appropriate public involvement / participation activities and measurable goals to ensure the reduction of POCs in stormwater discharges to the MEP.

2.3 Methodology for Compliance with Permit Requirements

In order to comply with this MCM, each municipality must involve the local public in their

SWMP. MS4s will be responsible for allowing public review of their individual SWMPs and Annual Reports. MS4s can also develop programs such as volunteer monitoring of outfalls, adopt-a-stream program, and storm sewer stenciling. These BMPs are not General Permit requirements but do foster public involvement and may be of interest to the local MS4 for incorporating into their SWMP.

2.4 Best Management Practices

2.4.1 Identify Contact Person for Stormwater Program

Description / Methodology

Establish a "Stormwater Management Officer" that is responsible for the management of the MS4s stormwater management program. The Stormwater Management Officer would likely be the Code Enforcement Officer, **Engineer**, or his/her staff. A consultant cannot be appointed as Stormwater Management Officer.

Annual Compliance Requirements

Common Council

Update the designated Stormwater Management Officer as necessary.

2.4.2 Incorporate Feedback Mechanism into Webpage

Description / Methodology

Through the municipality's webpage, provide a means for public input/comment regarding the stormwater management program.

Annual Compliance Requirements

City of Kingston

Maintain stormwater webpage feedback mechanism for residents to document their input/comments on the stormwater management program. Document input/comments received, and actions taken.

2.4.3 Public Review of Stormwater Management Plan

Description / Methodology

Provide the public with an ongoing opportunity to inspect the Stormwater Management Plan.

Annual Compliance Requirements

Stormwater Management Officer

Provide an opportunity for public inspection of the Stormwater Management Plan.

2.4.4 Public Review of Annual Report

Description / Methodology

All regulated MS4s must submit an annual report by June 1 of each year that updates the NYSDEC on the status of their stormwater management program. Before submittal of the annual report to NYSDEC, a draft report must be prepared and presented to the public for their review and comment.

Annual Compliance Requirements

Stormwater Management Officer

Present the draft Annual Report at a meeting that is open to the public and/or on the internet to solicit public review and comment.

Provide public notice about the presentation in accordance with State Open Meetings Law or other local public notice requirements. See Section 2.2 for specific Permit requirements.

2.4.5 Community Cleanup Event

Description / Methodology

Inform and encourage residents about the many opportunities that exist to participate in area community cleanup events: Household Hazardous Waste Collections held several times per year by Ulster County Resource Recovery Agency; locally sponsored "Kingston Clean Sweep" events that can be organized locally; and locally sponsored, volunteer cleanup activities such as those offered by the Clearwater and Scenic Hudson; and State sponsored Adopt A Highway Programs.

2.4.6 Identify key individuals and groups who are interested in/or affected by the permitting program

Description / Methodology

Environmental groups identified as having an interest in the Kingston's SWMP

Stormwater Management Program include: Ulster County Environmental Management Council (EMC), Kingston Conservation Advisory Committees (CAC's), Riverkeeper, and Clearwater.

Annual Compliance Requirements**Stormwater Management Officer**

Outreach to CAC, regarding the activities of the Kingston SWMP and how the group may assist with their local MS4 Stormwater Management Program.

2.4.7 Identify types of input the MS4 would seek from the individuals or groups to support development and implementation of the program**Description / Methodology**

Environmental groups identified as having an interest in the Kingston's Stormwater Management Program will be enlisted to assist with its implementation through participation in the Kingston's public education and public involvement workgroup. These groups will be encouraged to:

Assist with the developing public education materials and public involvement activities.

Publicize and staff community cleanup events.

Assist with public education activities.

Annual Compliance Requirements**Stormwater Management Officer**

Enlist support/participation of the municipal CAC in efforts related to implementation of their local Stormwater Management Program.

2.5 Required Reporting

At a minimum, the permittee shall report on the items below:

- a. annual report presentation information (date, time, attendees) or information about how the annual report was made available for comment;
- b. comments received and intended responses (as an attachment);
- c. public involvement / participation activities (for example stream cleanups including the number of people participating, the number of calls to a water quality hotline, the number and extent of storm drain stenciling); and
- d. report on effectiveness of program, BMP and measurable goal assessment.

2.6 Additional BMPs for Consideration**2.6.1 Adopt-A-Stream Program (OPTIONAL)****Description / Methodology**

Volunteer cleanup of local surface water bodies:

- Identify local public organizations or businesses that may be interested in participating in the program.
- Designate program coordinators and contacts for interested public groups who would like to participate or Adopt-A-Stream.
- Develop stream maintenance and cleaning procedures for groups interested in adopting a stream.
- Develop draft adoption agreement documents and distribute them to the interested groups for comment.
- Develop final adoption agreement documents and guidelines for stream cleaning procedures.

- Form adoption agreements with local public social groups and businesses to allow for volunteer stream cleanups.
- Provide adequate safety and disposal resources to volunteer groups at each Adopt-A-Stream scheduled cleaning.
- Post signs in visible locations along adopted streams informing the public about the organization responsible for cleanings and penalties for littering the stream segment.
- Maintain records of the number of stream segments adopted for cleaning and cleaned under this program.
- Annually report on the number of stream segments adopted and cleaned under this program.

Stormwater Management Officer

Identify local public organizations or businesses that may be interested in participating in the Adopt-A-Stream program.

Designate Adopt-A-Stream coordinators and contacts for interested public groups that would like to participate in Adopt-A-Stream program.

Form adoption agreements with local public social groups and businesses to allow for volunteer stream cleanups.

Annual: Provide adequate safety and disposal resources to volunteer groups at each Adopt-A-Stream scheduled cleaning.

Annual: Update program and agreements as necessary.

2.6.2 Storm Drain Stenciling (OPTIONAL)

Description / Methodology

Stenciling of stormwater inlet structures with messages related to stormwater quality issues.

- Identify target areas or streets to be included in the storm drain stenciling program.
- Identify groups that may be willing to participate in the storm drain stenciling program including consideration of the following groups:
 - o Local boy and girl scout organizations
 - o Local school groups
 - o Local fund raising groups
 - o Other civic organizations
- Develop slogans, logos, and/or text for stenciling stormwater inlet structures.
- Invite targeted groups to participate in the storm drain stenciling program.
- Provide necessary support for volunteer storm drain stenciling groups, e.g. stencils, paint, rollers, traffic control, safety equipment, trash bags, and landfill access or bulk litter collection.
- Maintain records of storm drain stenciling and volunteer participation.
- Annually report on number of storm drains stenciled by volunteers.

Stormwater Management Officer

Identify target areas or streets to be included in the storm drain stenciling program.

Develop slogans, logos, and/or text for stenciling stormwater inlet structures and create templates.

Invite targeted groups to participate in the storm drain stenciling program.

Update the Measurable Goals based on the program that is developed.

2.6.3 Volunteer Monitoring of Stormwater Outfalls (OPTIONAL)

Description / Methodology

Develop a volunteer monitoring program that recruits volunteers and provides them with the equipment and training to monitor stormwater outfalls.

Identify outfalls or areas safe for volunteer monitoring groups to conduct stormwater monitoring or dry weather screening.

Coordinate with local surface water monitoring agencies to acquire proper training and equipment for volunteer monitoring groups.

Develop guidelines and schedules for conducting volunteer monitoring in identified areas.

Identify groups that may be interested in participating in the volunteer monitoring program.

Invite identified groups to participate in the volunteer monitoring program.

Provide necessary support to the volunteer monitoring groups, e.g. sampling and testing equipment, data forms and safety equipment.

Maintain records of volunteer monitoring activities conducted under this program.

Annually report on volunteer monitoring activities conducted under this program.

Stormwater Management Officer

Identify outfalls or areas that are safe for volunteer monitoring groups to conduct stormwater monitoring or dry weather screening.

Develop guidelines for conducting volunteer monitoring in identified areas.

Invite identified groups to participate in the volunteer monitoring program.

Update the Measurable Goals based on the program that is developed.

2.6.4 Community Hotlines (OPTIONAL)

Description / Methodology

Develop and publicize a community hotline for the public to call and report stormwater quality problems.

Identify phone number(s) and contact person(s) that should receive reports from the public on stormwater quality issues.

Develop a list of stormwater quality problems that could be reported by the public through the community hotlines.

Develop and distribute public education materials that detail the types of stormwater quality issues that should be reported through the community hotlines.

Maintain records of public reports and comments received under this program.

Annually report on the number and type of public reports received through the community hotlines.

MS4s electing to implement this optional BMP:

Stormwater Management Officer

Identify phone number(s) and contact person(s) that should receive reports on stormwater quality issues through the community hotline program.

Develop a list of stormwater quality problems that could be reported by the public through the community hotline program.

Distribute community hotline public education material in accordance with identified schedule.

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SECTION 3 ILLICIT DISCHARGE DETECTION & ELIMINATION

3.1 Description of Minimum Control Measure

The Illicit Discharge Detection and Elimination minimum control measure consists of Best Management Practices (BMPs) that focus on the detection and elimination of illicit discharges into the MS4. The BMPs describe outfall mapping and update procedures; the legal authority mechanism that will be used to effectively prohibit illicit discharges; enforcement procedures and actions to ensure that the regulatory mechanism is implemented; the dry weather screening program, procedures for tracking down and locating the source of an illicit discharge; procedures for locating priority areas; and procedures for removing the source of the illicit discharge.

3.2 General Permit Requirements

An MS4 must, at a minimum:

- a. Develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at Section 122.26(b)(2) of GP-0-10-002) into the small MS4;
- b. Develop and maintain a map, at a minimum within the permittee's jurisdiction in the urbanized area and additionally designated area, showing:
 - the location of all outfalls and the names and location of all surface waters of the State that receive discharges from those outfalls;
 - by March 9, 2010, the preliminary boundaries of the permittee's storm sewersheds determined using GIS or other tools, even if they extend outside of the urbanized area (to facilitate trackdown), and additionally designated area within the permittee's jurisdiction; and
 - when grant funds are made available or for sewer lines surveyed during an illicit discharge trackdown, the permittee's storm sewer system in accordance with available State and EPA guidance;
- c. Field verify outfall locations;
- d. Conduct an outfall reconnaissance inventory, as described in the EPA publication entitled Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment, addressing every outfall within the urbanized area and additionally designated area within the permittee's jurisdiction at least once every five years, with reasonable progress each year;
- e. Map new outfalls as they are constructed or newly discovered within the urbanized area and additionally designated area;
- f. Prohibit, through a law, ordinance, or other regulatory mechanism, illicit discharges into the small MS4 and implement appropriate enforcement procedures and actions.

This mechanism must be equivalent to the State's model IDDE local law

"NYSDEC Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems". The mechanism must be certified by the attorney representing the small MS4 as being equivalent to the State's model illicit discharge local law. Laws adopted during the GP-02-02 permit cycle must also be attorney certified as effectively assuring implementation of the State's model IDDE law;

- g. Develop and implement a program to detect and address non-stormwater discharges, including illegal dumping, to the small MS4. The program must include: procedures for identifying priority areas of concern (geographic, audiences, or otherwise) for IDDE program; description of priority areas of

concern, available equipment, staff, funding, etc.; procedures for identifying and locating illicit discharges (trackdown); procedures for eliminating illicit discharges; and procedures for documenting actions;

- h. Inform public employees, businesses, and the general public of the hazards associated with illegal discharges and improper disposal of waste;
- i. Address the categories of non-stormwater discharges or flows (listed in Section 1.2 of this document) as necessary;
- j. Develop, record, periodically assess, and modify as needed, measurable goals; and
- k. Select appropriate IDDE BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.

3.3 Methodology for Compliance with the Permit Requirements

The City of Kingston, in partnership with the Ulster County Department of the Environment, worked to map all of the outfalls located within the City of Kingston MS4. The outfall map is located in the City of Kingston Engineer's Office.

An Illicit Discharge Track Down Protocol and Sampling Procedure was developed to assist Ms4s with identification of illicit discharges to their systems and the process to use to track down the source and eliminate it if it is impacting water quality.

To prohibit illicit discharges to the MS4 and establish enforcement procedures, NYS's Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer System was adopted by the City of Kingston Common Council.

3.4 Best Management Practices

3.4.1 Outfall Mapping

Description / Methodology

Develop and maintain a map, at a minimum within the permittee's jurisdiction in the urbanized area and additionally designated area, showing:

- the location of all outfalls and the names and location of all surface waters of the State that receive discharges from those outfalls;
- by March 9, 2010, the preliminary boundaries of the permittee's storm sewersheds determined using GIS or other tools, even if they extend outside of the urbanized area (to facilitate trackdown), and additionally designated area within the permittee's jurisdiction; and
- when grant funds are made available or for sewer lines surveyed during an illicit discharge trackdown, the permittee's storm sewer system in accordance with available State and EPA guidance;

The map should identify each outfall with a unique identifier, and link the outfall to a table of outfall properties that records pertinent properties of each outfall.

City of Kingston

A draft base map of all of the outfalls was completed in December 2007. The City of Kingston and the Ulster County Department of the Environment placed the in the City of Kingston's Engineering Office on a CD-ROM and a paper copy.

Sewershed Boundaries

The Stormwater Outfall mapping data has been compiled within the Ulster County GIS system. Included in the layers of GIS data within this system is the layer of designated watersheds, basins and sub-basins. This layer, when displayed along with the outfall data, provides a preliminary map of the sewershed boundaries and the potential area that would drain through a given outfall. The outfall data, as well as the watershed/basin/sub-basin layer of data, have also been incorporated into the Stormwater Management software.

Once an illicit discharge is detected at a specific outfall, the existing basin information and boundaries should be used to define the potential area where the source is located. The MS4 at this point will review storm sewer system drawings and plans to better define the sewershed associated with the outfall of concern.

Storm Sewer System Mapping

As resources become available through grants or enforcement actions, Kingston will begin to expand the existing outfall map to include the storm sewerlines and other storm facilities with the goal of mapping their entire storm sewer systems.

Additional Information / Resources

Refer to Appendix for the Following:

U.S. EPA: Guidelines for Visual Inspections of Stormwater Outfalls

3.4.2 Outfall Surveillance

Description / Methodology

Develop and implement a plan which will detect illicit discharges by conducting routine visual inspections of every mapped outfall. Also, the plan will set criteria for the inspection process. The following plan describes procedures to meet the two minimum requirements associated with outfall surveillance: Prioritizing outfalls for inspections and visual inspection procedures.

Dry Weather Outfall Inspections

The City of Kingston is required to set an annual goal to visually inspect 20% of their outfalls per year. A schedule should be developed annually.

Prioritizing Outfalls

The City of Kingston will endeavor to review the outfall mapping data and initial inspection information to rank their outfalls on a three to three tier priority basis using the following guidance information. (Example: High, Medium, Low)

- The initial inspection information indicates evidence of an illicit discharge. Since MS4s are required to track down and eliminate any identified illicit discharges from their system, any outfalls where an illicit discharge was identified during the initial inspection needs to be the first priority for follow-up.
- To search for outfalls where the initial inspection information identified a potential problem you can query the database for outfalls that have identified odors, structural damage, odd colors, floatables, or turbidity. The comment section for the outfalls where any of these problems were identified should provide a more detailed description of the problem.
- Identify the existing land use in the area or sewershed that the outfall drains. Types of land use that should receive priority: Industrial - potential for illicit connections as well as possible contamination from materials stored outside and any industrial processes or practices exposed to the weather.
- Areas where there are businesses which have industrial stormwater permits, or any type of

permitted wastewater discharge as well as any areas where there may be known business sectors with a record of enforcement actions.

- Heavy commercial use with large impervious parking lots, limited green space.
- Areas which are under development and have a significant amount of construction activity.
- Identify any environmentally sensitive areas downstream of the outfall.
- Does the outfall discharge to a protected stream, Impaired Waters (303(d) and TMDL) or protected wetland
- Is the outfall located in an area associated with public use, access or recreational facilities Is the outfall in an area where there has been ambient water quality sampling done that identifies high levels of particular contaminants (e.g., bacteria, metals, etc.) can help to target priority outfalls.
- Outfalls located in areas where there have been repeated complaints of illegal dumping, illicit discharges from pipes and/or apparent contamination in receiving waters should receive priority.
- Outfalls that are structurally damaged. Especially where the damage or structural deficiencies maybe contributing to the pollutant loading to the receiving waters during significant rain events.
- Outfalls located in older areas of the municipality
- Older development may predate more stringent construction codes regarding illegal connections older areas may have deteriorating sewer and/or storm sewer infrastructure.

Guidance for Prioritizing Stormwater Outfalls

See: Guidelines for Visual Inspections of Stormwater Outfalls

Additional Information / Resources

Refer to Appendix for the following information:

Outfall Inspection Report

3.4.3 Pollutant Source Tracking Procedures

Description / Methodology

Develop a plan to investigate and confirm the source of pollutants when water quality issues arise due to public complaints or by scheduled inspection of outfalls. The plan should include:

- A sampling procedure to confirm presence of illicit discharges.
- A protocol to track down the sources of pollution and provide sufficient evidence to pursue elimination and remediation of the illicit discharge.
- A generic spill response plan and coordinate emergency response with other agencies.

Annual Compliance Requirements

Stormwater Management Officer

Implement and enforce an Illicit Discharge Track Down and Elimination program utilizing the recommended protocol and in accordance with the Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer System. (Refer to Section 3.4.5)

Customize the spill response plan to meet municipality's needs

Additional Information / Resources

3.4.4 Adopted Stormwater Management Ordinance

Description / Methodology

The City of Kingston adopted a stormwater management ordinance to prohibit illicit discharges, and implemented enforcement procedures and actions as needed. The City of Kingston Common Council formally adopted NYS's Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer System in December 2007.

Annual Compliance Requirements

Stormwater Management Officer & Municipal Board

Amend stormwater ordinance as necessary to maintain compliance with NYS standards and requirements. Revise enforcement action procedures as needed.

Additional Information / Resources

Refer to 1.2 for a list of potential non-stormwater discharges

3.4.5 Addressing Categories of Non-Stormwater Discharges

Description / Methodology

The following discharges are exempt from discharge prohibitions established by local law unless the NYSDEC or the municipality has determined them to be substantial contributors of pollutants: water line flushing or other potable water sources, landscape irrigation or lawn watering, existing diverted stream flows, rising ground water, uncontaminated ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains, crawl space or basement sump pumps, air conditioning condensate, irrigating water, springs, water from individual residential car washing, natural riparian habitat or wetland flows, dechlorinated swimming pool discharges, residential street wash water, water from fire fighting activities, and any other water source not containing pollutants.

Annual Compliance Requirements

Stormwater Management Officer

Update non-stormwater discharge list as necessary such that no exempt stormwater discharge is a substantial contribution of pollutants.

3.5 Required Reporting

At a minimum, the permittee shall report on the items below:

- a. number and percent of outfalls mapped;
- b. number of illicit discharges detected and eliminated;
- c. percent of outfalls for which an outfall reconnaissance inventory has been performed. ;
- d. status of system mapping;
- e. activities in and results from informing public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste;
- f. regulatory mechanism status - certification that law is equivalent to the State's model IDDE law (if not already completed and submitted with an earlier annual report); and
- g. report on effectiveness of program, BMP and measurable goal assessment.

SECTION 4 CONSTRUCTION SITE RUNOFF CONTROL

4.1 Description of Minimum Control Measure

The Construction Site Runoff minimum control measure consists of Best Management Practices (BMPs) that focus on the reduction of pollutants to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre will be considered if it is part of a larger common plan of development or sale that would disturb one acre or more. The BMPs describe the legal authority mechanism that will be used to require erosion and sediment controls; enforcement procedures and actions to ensure compliance; requirements for construction site operators to implement appropriate erosion and sediment control BMPs; requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site; procedures for site plan review which incorporate the consideration of potential water quality impacts; procedures for receipt and consideration of information submitted by the public; and procedures for site inspection and enforcement of control measures.

The stormwater regulations for Construction Site Runoff Control apply to both privately- owned and managed projects, and MS4-owned and managed projects. Therefore, the BMPs described in this section have application to both types of projects.

4.2 General Permit Requirements

An MS4 must, at a minimum:

- a. Develop, implement, and enforce a program that:
 - i. provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities (either GP-02-01 or GP-0-10-002), unless more stringent requirements are contained within this general SPDES permit (GP-0-10-002);
 - ii. addresses stormwater runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Control of stormwater discharges from construction activity disturbing less than one acre must be included in the program if:
 - that construction activity is part of a larger common plan of development or sale that would disturb one acre or more
 - iii. includes a law, ordinance or other regulatory mechanism to require a SWPPP for each applicable land disturbing activity that includes erosion and sediment controls that meet the State's most up-to-date technical standards:
 - this mechanism must be equivalent to one of the versions of the "NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control"; and Analysis Workbook or be certified by the attorney representing the small MS4 as being equivalent to one of the versions of the sample laws if one of the sample laws is not adopted or if a modified version of the sample law is adopted;
 - iv. contains requirements for construction site operators to implement erosion and sediment control management practices;
 - v. allows for sanctions to ensure compliance to the extent allowable by State or local law;
 - vi. contains requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
 - vii. describes procedures for SWPPP review that incorporate consideration of potential water quality

impacts and review of individual pre-construction SWPPPs to ensure consistency with State and local sediment and erosion control requirements;

- ensure that the individuals performing the reviews are adequately trained and understand the State and local sediment and erosion control requirements;
- all SWPPPs must be reviewed for sites where the disturbance is one acre or greater; and
- after review of SWPPPs, the permittee must utilize the “SWPPP Acceptance Form” created by the Department of Environment Conservation and required by the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-002) when notifying construction site owner / operators that their plans have been accepted and approved by the permittee;

viii. describes procedures for receipt and follow up on complaints or other information submitted by the public regarding construction site storm water runoff;

ix. describes procedures for site inspections and enforcement of erosion and sediment control measures including steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water;

- the permittee must ensure that the individual(s) performing the inspections are adequately trained and understand the State and local sediment and erosion control requirements. Adequately trained means receiving inspector training by a Department of Environmental Conservation sponsored or approved training;
- all sites must be inspected where the disturbance is one acre or greater;

x. educates construction site owner / operators, design engineers, municipal staff and other individuals to whom these regulations apply about the municipality’s construction stormwater requirements, when construction stormwater requirements apply, to whom they apply, the procedures for submission of SWPPPs, construction site inspections, and other procedures associated with control of construction stormwater;

xi. by two years from the date this permit is issued, ensures that construction site operators have received erosion and sediment control training before they do work within the permittee’s jurisdiction. Small home site construction (construction where the Erosion and Sediment Control Plan is developed in accordance with Appendix E of the “New York Standards and Specifications for Erosion and Sediment Control”) is exempt from the requirements below:

- training may be provided by the Department of Environmental Conservation or other qualified entities (such as Soil and Water Conservation Districts);
- the permittee is not expected to perform such training, but they may cosponsor training for construction site operators in their area;
- the permittee may ask for a certificate of completion or other such proof of training; and
- the permittee may provide notice of upcoming sediment and erosion control training by posting in the building department or distribute with building permit application;

xii. establishes and maintains an inventory of active construction sites, including the location of the site, owner / operator contact information;

xiii. develop, record, periodically assess and modify as needed measurable goals; and

xiv. select appropriate construction stormwater BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP

4.3 Methodology for Compliance with Permit Requirements

The City of Kingston has adopted, and added amendments to, the NYS Sample Local Law for Stormwater Management and Erosion & Sediment Control. This ordinance authorizes the MS4 to enforce a program that reduces pollutant runoff from construction sites. The MS4 will be responsible for reviewing SWPPPs inspecting construction sites, and enforcing the permit requirement on developer's that do not comply with the regulations.

4.4 Best Management Practices

4.4.1 Stormwater Ordinance

Description / Methodology

The stormwater management ordinance establishes minimum stormwater management requirements and controls to protect the general health, safety, and welfare of the public. The ordinance addresses issues relating to:

- Erosion and Sediment Control
- Stormwater Design Requirements
- Construction Requirements
- Fees for municipal services relating to SWPPP reviews, inspections, and maintenance.

Annual Compliance Requirements

Common Council

Customize the fee structure and ordinance to incorporate municipality's requirements. Fee structure should be referenced in Local Law but not a part of it in order to allow for future updates to the fee structure without having to revise the Local Law.

Stormwater Management Officer & Municipal Board

- Revise fee schedule as needed.
- Amend stormwater ordinance as necessary to maintain compliance with NYS Standards and Requirements.

4.4.2 Design Requirements

Description / Methodology

Evaluate existing in-house practices related to review of project planning and design criteria for required changes based on compliance with local, state and/or federal construction stormwater regulations. Develop project planning and design requirements, and communicate requirements to the design and construction communities.

Many MS4-owned and managed projects, and some privately-owned and managed projects, have special conditions which make implementation of standard pollution prevention practices, as defined in the NYS Stormwater Management Design Manual, impractical to implement. Such projects include highway reconstruction, demolition/redevelopment, waterline construction, and other linear-type construction. Acceptable design criteria for these special condition projects must be approved by the MS4 on a project-by-project basis, and the owner's preparation of the GP-0-10-002 Stormwater Pollution Prevention Plan (SWPPP) is the mechanism by which accepted practices are evaluated by MS4.

Annual Compliance Requirements

City of Kingston

Review construction project, planning, and design criteria to determine changes needed to comply with local, state and/or federal construction stormwater regulations.

Prepare construction design and permitting guidelines for the local design and construction communities, and involved MS4 personnel.

Distribute construction design and permitting guidelines to the local design and construction communities, and involved MS4 personnel.

Stormwater Management Officer

Revise design and permitting guidelines as necessary

4.4.3 Construction Plan Review

Description / Methodology

Develop a set of criteria to be utilized by the municipality to verify construction plan compliance with local, state, and/or federal construction stormwater regulations.

Prepare a list of approved structural and non-structural BMPs that meet the requirements of the stormwater regulations. This list will identify if the BMP needs to be used in combination with other BMPs in order to completely satisfy the regulations requirements.

Develop internal tracking and plan review procedures to cover the following issues:

- Conformance to local stormwater regulations
- Appropriate use of temporary erosion controls
- Inclusion of any required local, state, and/or federal stormwater permit documents

Prepare a checklist of items that must be verified by the reviewer for each construction plan review. This checklist will be available to developers, contractors, engineers, and architects to assist them in preparing satisfactory plans.

Provide training for municipal engineers, building department staff, and other municipal representatives that will be completing the construction plan reviews within each municipality.

Educate the local construction community (contractors, developers, engineers, architects) on the construction plans review process.

Implement the construction plans review procedures for local construction sites.

Notify the owners of construction plans when deficiencies are found in the plans during the review process.

Maintain records of plans reviewed and approved for construction under this program.

Conduct SWPPP review for all sites within the MS4 Urbanized Area where the disturbance is one acre or greater to ensure consistency with State and local sediment and erosion control requirements:

- SWPPP Acceptance Form issued by NYSDEC, and required by the General Permit for Stormwater Discharges from Construction Activity (GP-0-10-002), must be signed prior to obtaining permit coverage to indicate plans have been accepted and approved by the MS4. The construction site owner operators should include the signed SWPPP Acceptance Form with the NOI submitted to NYSDEC for Permit coverage.

Annual Compliance Requirements

City of Kingston

Develop criteria to verify construction plan compliance

Prepare list of approved structural and non-structural BMPs.

Prepare a checklist of items for reviewers to verify compliance with regulations.

- SEQRA Process
- Planning board review
- Planning board approvals
- BMP compliance checklist
- Adherence to NYS Stormwater Design Manual
- Use of Blue-Book contractors

Customize checklist to incorporate any local requirements.

- Compliance with City of Kingston zoning regulations
- Review and approval by Ulster County Planning Board where applicable

Continue to train municipal staff that will be completing construction plan reviews.

Educate the local construction community on the construction plans review process.

Stormwater Management Officer

Implement the construction plans review procedures for local construction sites.

Train additional municipal staff as necessary and update per customized local code. Any changes to construction plan review procedures must be communicated to municipal staff.

Revise checklist as necessary.

Ensure SWPPP reviews are conducted by qualified professionals or supervised by qualified professionals

4.4.4 Construction Inspection Procedures and Certification Program

Description / Methodology

Develop inspection procedures and educate the local construction community on local stormwater regulations related to construction activities.

Conduct inspections of local construction sites that discharge stormwater to the MS4 to determine compliance with local construction stormwater regulations.

Develop a list of items to incorporate in the inspection of local construction sites based on the final local construction stormwater regulations and including the following categories:

- Use of temporary erosion controls
- Control of other construction related wastes
- Operational and general prohibitions
- Site closure and stabilization requirements
- On-site documentation and records
- Enforcement actions and on-site communication issues

Require all construction site operators to verify at least one employee on site has received required erosion and sediment control training within the last 3 years before they do work within the MS4's jurisdiction.

Develop draft inspection forms and procedures necessary to inspect local construction sites in order to ensure compliance with local construction stormwater regulations.

Notify the local construction community (contractors, developers, engineers, architects) for them to review the draft inspection documents and procedures.

Provide notification to the local construction community of the final inspection procedures.

Develop internal procedures for tracking new and on-going construction activities.

Train MS4 inspection personnel on local construction stormwater regulations and inspection procedures.

Inspect qualifying construction sites using appropriate inspection procedures and forms to ensure compliance with local stormwater regulations.

Issue enforcement actions to owners and operators of local construction sites that are not in compliance

with local construction stormwater regulations.

Maintain records of construction site inspections, enforcement actions, and corrective actions performed by local construction site owners and operators.

Maintain inventory of active construction sites within the MS4 Urbanized Area.

Annual Compliance Requirements

City of Kingston

Review list of items to in the inspection of local construction sites based on the final local construction stormwater regulations.

Develop inspection forms and procedures necessary to inspect local construction sites in order to ensure compliance with local construction stormwater regulations.

Notify the local construction community for them to review the draft inspection documents and procedures.

Provide notification to the local construction community of the final inspection procedures.

Complete training for MS4 inspection personnel on local construction stormwater regulations and inspection procedures

Stormwater Management Officer

Inspect qualifying construction sites using appropriate inspection procedures and forms to ensure compliance with local stormwater regulations.

Issue enforcement actions to owners and operators of local construction sites that are not in compliance with local construction stormwater regulations.

By May 1, 2010, ensure that all construction site operators have least one employee on site who has received required 4 hour erosion and sediment control training within the last 3 years before they do work within the MS4's jurisdiction. The Stormwater Management Officer should obtain proof in the form of an attendance record or other documentation provided to attendees for the purpose of documentation (GP-0-10-002 Part VII.A.4.a.xi).

Maintain an Inventory of active construction sites within the MS4 Urbanized Area in accordance with GP-0-10-002 Part VII.A.4.a.vii.

Stormwater Compliance Inspection Form

Strategy for Transition of Construction Stormwater Oversight

4.4.5 Project Status Monitoring and Reporting

Description / Methodology

As part of the enforcement code in the stormwater ordinance, records must be maintained to determine construction sites that are either in compliance or not in compliance with state and/or federal construction stormwater permits.

Municipalities are also required to report the number of construction projects that are permitted under state and/or federal construction stormwater regulations.

Annual Compliance Requirements:

Stormwater Management Officer

Maintain compliance records for all construction sites requiring state and/or federal construction stormwater permits.

4.4.6 Public Review of Design Plans and Construction Projects

Description / Methodology

Provide the public with an opportunity to review and comment on proposed design plans and

construction sites.

Develop procedures for the public to request information and relay concerns to the representative of the municipality.

Annual Compliance Requirements:

Stormwater Management Officer

Coordinate review and comment on proposed design with the City Planning Board.

Provide a form on the municipal webpage and at City Hall that allows residents to relay concerns regarding a construction project.

Document the comments received from the public and any actions taken.

4.4.7 Education and Training Measures for Construction Site Operators

Description / Methodology

Provide educational material and training opportunities to developers, contractors, engineers, and architects to inform them of the local, state, and/or federal regulations that will impact their developments.

4.5 Required Reporting

At a minimum, the permittee shall report on the items below:

- a. number of SWPPPs reviewed;
- b. number and type of enforcement actions;
- c. percent of active construction sites inspected once;
- d. percent of active construction sites inspected more than once;
- e. number of construction sites authorized for disturbances of one acre or more; and
- f. report on effectiveness of program, BMP and measurable goal assessment.

SECTION 5 POST-CONSTRUCTION STORMWATER MANAGEMENT

5.1 Description of Minimum Control Measure

The Post-Construction Stormwater Management minimum control measure consists of Best Management Practices (BMPs) that focus on the prevention or minimization of water quality impacts from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that discharge into the MS4. The BMPs describe structural and/or non-structural practices; the legal authority mechanism that will be used to address post-construction runoff from new development and redevelopment projects; and procedures to ensure long term operation and maintenance of BMPs.

5.2 General Permit Requirements

An MS4 must, at a minimum:

- a. Develop, implement, and enforce a program that:
 - i. provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities (either GP-02-01 or GP-08-001), unless more stringent requirements are contained within this general SPDES permit (GP-0-10-002);
 - ii. addresses stormwater runoff from new development and redevelopment projects to the MS4 from projects that result in a land disturbance of greater than or equal to one acre. Control of stormwater discharges from projects of less than one acre must be included in the program if:
 - that project is part of a larger common plan of development or sale; or
 - if controlling such activities in a particular watershed is required by the Department;
 - iii. includes a law, ordinance or other regulatory mechanism to require post-construction runoff controls from new development and re-development projects to the extent allowable under State or local law that meet the State's most up-to-date technical standards:
 - the mechanism must be equivalent to one of the versions of the "NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control"; and
 - iv. includes a combination of structural management practices (including, but not limited to practices from the NYS Stormwater Management Design Manual or equivalent) and / or non-structural management practices (including, but not limited to comprehensive plans, open space preservation programs, Low Impact Development (LID), Better Site Design (BSD) and other Green Infrastructure practices, land use regulations) appropriate for the permittee that will reduce the discharge of pollutants to the MEP. Permittees are encouraged to implement Green Infrastructure practices at a site level and to review, and revise where appropriate, local codes and laws that include provisions that preclude construction that minimizes or reduces pollutant loadings.
 - if a stormwater management practice is designed and installed in accordance with the New York State Stormwater Management Design Manual or has been demonstrated to be equivalent and is properly operated and maintained, then MEP will be assumed to be met for post-construction stormwater discharged by the practice;
 - v. describes procedures for SWPPP review that incorporate consideration of potential water quality impacts and review of individual pre-construction SWPPPs to ensure consistency with local post-construction stormwater requirements;
 - ensure that the individuals performing the reviews are adequately trained and understand the State and local post construction stormwater requirements;

- ensure that the individuals performing the reviews for SWPPPs that include post-construction stormwater management practices are qualified professionals or under the supervision of a qualified professional;
 - all SWPPPs must be reviewed for sites where the disturbance is one acre or greater; and
 - after review of SWPPPs, the permittee must utilize the “SWPPP Acceptance Form” created by the Department and required by the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-002) when notifying construction site owner / operators that their plans have been accepted and approved by the permittee;
- vi. Establish and maintain an inventory of post- construction stormwater management practices within the permittees jurisdiction. Include practices discharging to the MS4 that have been installed since March 10, 2003, all practices owned by the MS4, and those practices found to cause or contribute to water quality standard violations.
- the inventory shall include: location of practice (street address or coordinates); type of practice; maintenance needed per the NYS Stormwater Management Design Manual, SWPPP, or other provided documentation; and dates and type of maintenance performed; and
- vii. ensures adequate long-term operation and maintenance of management practices identified in Part VII.A.5.vi by trained staff, including inspection to ensure that practices are performing properly.
- The inspection shall include inspection items identified in the maintenance requirements (NYS Stormwater Management Design Manual, SWPPP, or other maintenance information) for the practice. Permittees are not required to collect stormwater samples and perform specific chemical analysis;
 - b. Develop, implement, and provide adequate resources for a program to inspect development and re-development sites by trained staff and to enforce and penalize violators;
 - c. Develop, record, periodically assess and modify as needed measurable goals; and
 - d. Select appropriate post-construction stormwater BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.

5.3 Methodology for Compliance with Permit Requirements

The City of Kingston has adopted NYS’s Sample Local Law for Stormwater Management and Erosion & Sediment Control which includes provisions to enforce a program that reduces pollutant runoff from newly developed and redeveloped sites. The Stormwater Management Officer is responsible for inspecting all development and redevelopment sites and maintenance of stormwater devices and enforcing the permit requirements for properties that are not in compliance.

5.4 Best Management Practices:

5.4.1 Stormwater Ordinance

Description / Methodology

The stormwater management ordinance establishes minimum stormwater management requirements and controls to protect the general health, safety, and welfare of the public. The ordinance addresses issues relating to:

- Erosion and Sediment Control
- Stormwater Design Requirements
- Construction Requirements

Annual Compliance Requirements

Stormwater Management Officer & Common Council

Amend stormwater ordinance as necessary to maintain compliance with NYS Standards and Requirements.

5.4.2 Inspection Program for Newly Developed and Redeveloped Sites

Description / Methodology

Develop an inspection program for newly developed and redeveloped sites for compliance with the post-construction regulations.

Develop a list of items to incorporate in the inspection of project sites based on the final post-construction runoff control regulations including consideration of the following:

- Construction of controls according to approved development plans and specifications.
- Adherence to any legal commitment to operate or maintain permanent stormwater quality structures.
- Conformance to open space and landscaping requirements.
- Conformance to local development standards.

Develop post-construction inspection forms and procedures.

Develop internal tracking procedures for tracking development projects that are under construction and/or have been completed.

- Coordinate with Planning Board review and site inspections where possible

Train inspection personnel on local post-construction runoff regulations and final inspection procedures.

Inspect qualifying project sites using adopted inspection forms and procedures to ensure conformance with local post-construction runoff regulations.

Issue enforcement actions to owners or operators of local development projects that are not in compliance with local post-construction runoff regulations.

Maintain records of development project site inspections, enforcement actions, and corrective actions performed by local development project owners.

Conduct SWPPP review for all sites within the MS4 Urbanized Area where the disturbance is one acre or greater to ensure consistency with State and local post-construction stormwater requirements;

- SWPPP Acceptance Form issued by NYSDEC, and required by the General Permit for Stormwater Discharges from Construction Activity (GP-0-10-002), must be signed prior to obtaining permit coverage to indicate plans have been accepted and approved by the MS4. The construction site owner / operators should include the signed SWPPP Acceptance Form with the NOI submitted to NYSDEC for Permit coverage.

Annual Compliance Requirements

City of Kingston

Develop draft inspection forms and procedures necessary to inspect local new and re-development projects in order to ensure compliance with local post- construction runoff regulations and approved plans.

Produce the final version of the project inspection forms and procedures.

Train inspection personnel on local post-construction runoff regulations and final inspection procedures.

Stormwater Management Officer

Maintain an inventory of projects that qualify for inspection under local post-construction runoff regulations in accordance with GP-0-10-002 Part VII.A.5.a.vi..

Inspect qualifying development project sites using adopted inspection forms and procedures to ensure conformance with local post-construction runoff regulations in accordance with GP-0-10-002 Part VII.A.5.a.vii..

Issue enforcement actions to owners or operators of local development projects that are not in compliance with local post-construction runoff regulations.

Ensure SWPPP reviews are conducted by qualified professionals or supervised by qualified professionals

5.4.3 Asset Management Program for Existing Storm Drainage Facilities

Description / Methodology

Develop and implement an asset management program for all public existing storm drainage systems

Identify the location of each storm drainage facility including:

- Open or closed
- Tributary drainage area
- Current Condition

Develop a list of performance indicators that will enable a measurable evaluation of the system. Create thresholds for each indicator that if exceeded enables the inclusion of that system as a priority for maintenance, rehabilitation, or replacement.

Develop inspection forms and procedures for inspection of existing facilities.

Develop a weighting value for each performance indicator to allow a suitable comparison of the various storm facilities with the end result that each facility be given a numerical score and prioritized appropriately.

Develop a comprehensive list of approved maintenance, rehabilitation, and replacement practices.

Use the prioritized list to determine approved projects for the next budget year.

Stormwater Management Officer

Identify the existing storm facilities.

Develop the performance indicators, inspection forms, and procedures.

Inspect a minimum of 20% of the storm facilities. Develop and maintain the prioritized list of necessary improvements.

5.5 Required Reporting

At a minimum, the permittee shall report on the items below:

- i. number of SWPPPs reviewed;
- ii. number and type of enforcement actions;
- iii. number and type of post-construction stormwater management practices inventoried;
- iv. number and type of post-construction stormwater management practices inspected;
- v. number and type of post-construction stormwater management practices maintained;

- vi. regulatory mechanism status - certification that regulatory mechanism is equivalent to one of the “NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control” (if not already done); and
- vii. report on effectiveness of program, BMP and measurable goal assessment;

5.6 Develop a Flood Hazard Mitigation Plan (OPTIONAL)

Description / Methodology

Develop a Flood Hazard Mitigation Plan that addresses the flooding issues throughout the municipality. The plan articulates a comprehensive strategy for implementing technically feasible flood mitigation activities for the area affected by the plan. At a minimum, the plan includes the following elements:

- Description of the planning process and public involvement. Public involvement may include workshops, public meetings, or public hearings.
- Description of the existing flood hazard and identification of the flood risk, including estimates of the number and type of structures at risk, repetitive loss properties, and the extent of flood depth and damage potential.
- The floodplain management goals for the area covered by the plan.
- Identification and evaluation of cost-effective and technically feasible mitigation actions considered.
- Presentation of the strategy for reducing flood risks and continued compliance with the NFIP, and procedures for ensuring implementation, reviewing progress and recommending revisions to the plan.
- Documentation of formal plan adoption by the municipality submitting the plan.

Use of the Planning Guidelines required by the Community Rating System (CRS) of the NFIP is recommended for use in the completion of community flood mitigation plans.

Stormwater Management Officer

Apply for grants for preparing a Flood Hazard Mitigation Plan.

Prepare a Flood Hazard Mitigation Plan using municipal staff or through a consultant.

Review Flood Hazard Mitigation Plan to identify implementation projects and develop funding for these projects through grants, or municipal budgets.

SECTION 6 - POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

6.1 Description of Minimum Control Measure

The Pollution Prevention / Good Housekeeping minimum control measure consists of Best Management Practices (BMPs) that focus on training and on the prevention or reduction of pollutant runoff from municipal operations. The BMPs describe the training program; specific municipal operations that are impacted by the proposed operation and maintenance programs (BMPs); maintenance activities, schedules and long term inspection procedures for controls to reduce floatables and other pollutants; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations; procedures for the proper disposal of waste removed from the MS4 and municipal operations, including dredge spoil, accumulated sediments, floatables and other debris.

6.2 General Permit Requirements

An MS4 must, at a minimum:

- a. Develop and implement a pollution prevention / good housekeeping program for municipal operations and facilities that:
 - i. addresses municipal operations and facilities that contribute or potentially contribute POCs to the MS4 system. The operations and facilities may include, but are not limited to: street and bridge maintenance; winter road maintenance; stormwater system maintenance; vehicle and fleet maintenance; park and open space maintenance; municipal building maintenance; solid waste management; new construction and land disturbances; right-of-way maintenance; marine operations; hydrologic habitat modification; or other;
 - ii. at a minimum frequency of once every three years, perform a self assessment of all municipal operations addressed by the SWMP to:
 - determine the sources of pollutants potentially generated by the permittee's operations and facilities; and
 - identify the municipal operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already;
 - iii. determines management practices, policies, procedures, etc. that will be developed and implemented to reduce or prevent the discharge of (potential) pollutants. Refer to management practices identified in the "NYS Pollution Prevention and Good Housekeeping Assistance Document" and other guidance materials available from the EPA, State, or other organizations;
 - iv. prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and permittee's capabilities;
 - v. addresses pollution prevention and good housekeeping priorities;
 - vi. includes an employee pollution prevention and good housekeeping training program and ensures that staff receive and utilize training;
 - vii. requires third party entities performing contracted services, including but not limited to street sweeping, snow removal, lawn / grounds care, etc., to meet permit requirements as the requirements apply to the activity performed ; and
- b. Develop, record, periodically assess and modify as needed measurable goals; and
- c. Select appropriate pollution prevention and good housekeeping BMPs and measurable goals to ensure

the reduction of all POCs in stormwater discharges to the MEP.

6.3 Methodology for Compliance with Permit Requirements

The City of Kingston has developed a guidance document for use by all City Departments that identifies the BMPs to reduce and prevent discharge of pollutants to the MEP from municipal activities. The Environmental Educator will provide training to the municipal personnel of participating departments. These personnel will be responsible for implementing the BMPs in their everyday activities.

6.4 Best Management Practices

6.4.1 Municipal Training Program

Description / Methodology

Develop a program that provides training to each member of the municipality whose work may potentially impact stormwater. This includes highway, water, buildings and grounds, sewer, parks, and recreation departments.

Annual Compliance Requirements

City of Kingston

Conduct training sessions for the municipal employee(s) that have been designated for teaching the remaining members of the municipality.

Stormwater Management Officer

Provide refresher training for employees

Train all (new) municipal employees whose job duties (will) involve work pertaining to all municipal operations that have the potential to affect stormwater runoff

Identify new BMPs

Develop/modify inspection checklists

Develop/implement SOP's

Periodically, search sources/documents for reference information to identify any new information pertaining to stormwater BMPs, and incorporate as necessary into existing municipal operations

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.2 Landscaping and Lawn Care

Description / Methodology

Reduce the discharge of pollutants from permittee owned facilities through better mowing and landscaping maintenance practices.

Develop an inventory of landscaping and lawn care areas that are owned by the permittee.

Evaluate current landscaping and lawn care activities in order to identify opportunities to reduce the discharge of the following:

- Fertilizers
- Leaf litter and tree trimmings
- Litter and floatable materials

- Equipment fluids

Ensure that proper litter collection is scheduled prior to any mowing activities.

Use all herbicides, pesticides, and fertilizers in accordance with manufacturers' instructions for application rates and quantities.

Purchase only enough lawn care products necessary for one year – store properly to avoid waste generation (spills, leaks).

Use slow release or naturally derived (organic) fertilizers.

Train employees in the proper application of lawn care products.

Evaluate methods for containing and/or composting trimmings and grass clippings.

Develop zero input/low input lawns.

Consider alternative landscape techniques (i.e. naturescaping, xeriscaping).

Plant trees away from sewer lines or other underground utilities.

Use drip irrigation techniques for landscaping.

Water plants with runoff collected from roof downspouts.

Report annually on the activities conducted under this program.

Annual Compliance Requirements

Stormwater Management Officer

Review monitoring and maintenance program and revise as necessary.

Maintain/update as necessary an inventory of all municipally owned lands that are/will be subject to landscaping and lawn care activities.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.3 Vehicle/Equipment Maintenance

Description / Methodology

- Develop and maintain an inventory of municipally owned vehicles.
- Maintain vehicles according to manufacturer's specifications,
- Require vehicle operators to conduct daily inspections of vehicles to identify fluid leaks, schedule repairs, and eliminate leaks.
- Conduct maintenance indoors whenever possible.
- For maintenance performed outside, guard against spillage of materials that could discharge to storm receivers.
- If possible, seal floor drains that discharge directly to the environment. If not possible, obtain wastewater discharge permits from regulatory agency.
- Initiate single purpose use of vehicle bays – dedicate one (or more) bays that have no (or sealed) floor drains for repairs/maintenance
- Clean up spilled materials immediately, using “dry” methods
- Install pretreatment systems (oil/water separators) where necessary in sewer lines to capture contaminants (oil, grit), and maintain as needed
- Never leave vehicles unattended while refueling
- Identify appropriate recycling/disposal options for wastes
- Maintain vehicle maintenance records and document fluid leak repair activities.
- Review vehicle inspection and maintenance records on an annual basis to evaluate conformance to vehicle manufacturer service specifications.

Annual Compliance Requirements

Stormwater Management Officer

Review vehicle inspection and maintenance records to evaluate conformance to vehicle manufacturer service specifications and local stormwater program requirements.

Maintain/update as necessary an inventory of all municipally owned vehicles and equipment

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.4 Vehicle/Equipment Washing

Description / Methodology

- Wash vehicles and equipment using methods to prevent discharge of pollutants to the municipal storm sewer system or local waterbodies.
- Initiate single purpose use of vehicle bays - dedicate only one bay for washing (with floor drain system).
- Perform cleaning with pressurized cold water, without the use of soaps, if wastewaters will flow to a storm sewer system.
- Use minimal amounts of biodegradable soaps only if wastewaters will discharge to a sanitary sewer system.
- Rinse with hoses that are equipped with automatic shutoff devices and spray nozzles.
- Steam clean (without soap) where wastes can be captured for proper disposal (i.e. oil/water separator).

Annual Compliance Requirements

Stormwater Management Officer

- Inspect floor drain systems regularly – use only those that discharge to a sanitary sewer or those that are permitted by the regulatory agency. Identify the need for cleaning of catch basins, oil/water separators.
- Perform steam cleaning or pressure washing where wastes can be captured for proper disposal.
- Maintain/update as necessary an inventory of all vehicles and equipment.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.5 Building Maintenance

Description / Methodology

- Conduct building maintenance activities so that runoff does not impact the stormwater systems and/or local water bodies.
- Develop a list of the maintenance activities required inside and outside of each municipal building.
- Identify which activities have an impact on stormwater.
- Develop mitigation measures for each activity that impacts stormwater.
- Review the maintenance activity list on an annual basis to determine if any improvements are necessary.

Annual Compliance Requirements

Stormwater Management Officer

- Implement the mitigation measures for each activity.

- Review the maintenance activity list and update as necessary.
- Review the mitigation measures for each activity and revise as necessary.
- Maintain/update as necessary an inventory of all facilities and material storage areas.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.6 Hazardous and Waste Materials Management

Description / Methodology

- Prevent the discharge of hazardous and waste materials from impacting municipal stormwater systems and local waterbodies.
- Ensure that all materials are stored in closed, labeled containers – if stored outside, drums should be placed on pallets, away from storm receivers – inside storage areas should be located away from floor drains.
- Eliminate floor drain systems that discharge to storm drains, if possible.
- Use a pretreatment system to remove contaminants prior to discharge.
- Reduce stock of materials “on hand” – use “first in/first out” management technique.
- Use the least toxic material (i.e. non hazardous) to perform the work.
- Install/use secondary containment devices where appropriate.
- Eliminate waste generation (i.e. reincorporate coating/solvent mixtures into the original coating material for reuse).
- Recycle materials if possible, or ensure proper disposal of wastes

Annual Compliance Requirements

Stormwater Management Officer

- Implement plan for proper storage of all hazardous and waste materials.
- Verify that floor drains have been sealed (or redirected to sanitary sewer).
- Inspect material storage areas (inside and outside).
- Ensure timely cleaning of oil/water separators by qualified contractor.
- Inspect stormwater discharge locations (for contaminants, soil staining, plugged discharge lines).
- Repair or replace any leaking/defective containers, and replace labels as necessary.
- Maintain caps and/or covers on containers.
- Maintain aisle space for inspection of products/wastes.
- Maintain/update as necessary an inventory of all facilities and material storage areas.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.7 Operational By Products/Wastes

Description / Methodology

- Prevent the potential for leaching of toxic and biological contaminants from reaching the municipal stormwater system or local waterbodies.
- Post “no dumping” signs.
- Illuminate area if possible.
- Prevent access – erect barriers.
- Identify the by products/wastes that should be recycled (i.e. paper, cardboard) or can be legally

disposed of on municipal lands (i.e. deer carcasses) by referencing NYSDEC regulations (6NYCRR PART 360)

Annual Compliance Requirements

Stormwater Management Officer

- Clean up and dispose of “illegally dumped” materials, trash/debris in accordance with environmental regulations.
- Cut and remove vegetation from “dump areas”.
- Regularly schedule inspections - for maintenance concerns
- Coordinate with police for unscheduled patrolling of dump areas.
- Maintain/update as necessary an inventory of all municipally owned lands – identify areas at which illegal dumping may occur, and patrol those areas.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.8 Spill Response and Prevention

Description / Methodology

- Review spill response procedures to ensure stormwater quality protection measures are considered during spill response.
- Conduct employee training
- Maintain spill prevention equipment.
- Keep all materials properly stored in closed, labeled containment systems.
- Use secondary containment systems where appropriate

Annual Compliance Requirements

Stormwater Management Officer

- Inspect secondary containment systems and oil/water separators
- Inspect containers for leaks, areas near storm receiver inlets and outlets, floor drains for indication of spills.
- Pump out oil water separators as needed.
- Protect drains with oil absorbent materials
- Clean out receivers on regular schedule
- Remove spilled salt from salt loading area

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.9 Roadway and Bridge Maintenance

Description / Methodology

- Assess roadways and bridges maintenance activities and modify procedures to reduce stormwater quality impacts.
- Incorporate preventive maintenance and planning for regular operations & maintenance activities.
- Pave in dry weather only.
- Stage road operations and maintenance activity (patching, potholes) to reduce spillage. Cover catch basins and manholes during this activity.
- Clean up fluid leaks or spills from paving equipment/materials immediately.
- Restrict the use of herbicides/pesticide application to roadside vegetation.

- Use porous asphalt for pothole repair and shoulder work.
- Sweep and vacuum paved roads and shoulders to remove debris and particulate matter.
- Maintain roadside vegetation; select vegetation with a high tolerance to road salt.
- Control particulate wastes from bridge sandblasting operations.
- Clean out bridge scuppers and catch basins regularly.
- Direct water from bridge scuppers to vegetated areas.
- Mechanically remove (i.e. sweep) debris from bridge deck and structure prior to washing.

Annual Compliance Requirements

Stormwater Management Officer

- Assess current roadway maintenance activities to determine if modification to current practices would benefit stormwater quality.
- Identify alternative practices that would minimize the contamination of stormwater runoff during construction or maintenance activities.
- Revise roadway maintenance specifications according to identified alternative practices.
- Maintain records of road maintenance activities and the use of alternative maintenance practices.
- Evaluate roadway maintenance program and revise roadway maintenance specifications according to identified alternative practices.
- Maintain/update as necessary an inventory of all municipally owned infrastructure – it is essential to include underground infrastructure (i.e. ditches, underground storm piping, septic systems, UST's, oil/water separators, catch basins/sewers, etc.)

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.10 Road Salt Storage and Application

Description / Methodology

- Provide proper storage and application of road salt to reduce the impact of salt on plants, aquatic life, and the local waterbodies.
- Require covered facility for salt storage (prevents lumping and run-off loss), and size properly for seasonal needs.
- Store salt on highest ground elevation to mitigate contact with stormwater.
- Calibrate salt spreaders as necessary.
- Consider alternative deicing materials (i.e. calcium chloride, magnesium chloride).
- Consider building a covered area for salt loading operations (if none exists).
- If possible, use a wetting agent with salt to minimize “bounce” during application, if possible.
- Unload salt deliveries directly into storage facility, or if not possible, move inside immediately.

Annual Compliance Requirements

- Stormwater Management Officer/ Asst. Superintendent of Highways / Superintendent of Public Works
- Storage shed for leaks, structural problems. Repair as needed.
- Inspect salt piles for proper coverage, tarps for leaks or tears. Replace tarps as needed.
- Inspect salt application equipment.
- Inspect salt regularly for lumping or water contamination.
- Inspect surface areas for evidence of runoff – salt stains on ground near and around the salt shelter, loading area, or downslope.
- Inspect for excessive amounts of salt on roads.
- Inspect equipment to verify proper operation. Service trucks and calibrate spreaders regularly to

ensure accurate, efficient distribution of salt.

- Maintain/update as necessary an inventory of all municipally owned facilities and salt storage areas, structures, and equipment.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.11 Catch Basin and Storm Drain System Cleaning

Description / Methodology

- Reduce sediment and floatable materials discharges by routinely cleaning municipal catch basins and stormwater inlet structures.
 - Identify areas where catch basins, surface inlets, and/or storm sewer manholes should be more frequently cleaned to reduce discharge of floatable materials, sediment, and other materials.
 - Develop a preliminary schedule for cleaning inlet structures, catch basins, and manholes.
 - Implement the catch basin cleaning program according to the developed schedule.
 - Evaluate the catch basin cleaning schedule on an annual basis.
 - Address storm drain receivers and (below grade) storm sewer systems,
 - parking lot receivers, and open ditches.
 - Catch basins and floor drain systems inside of buildings should be either:
 - Sealed to prevent discharge
 - Permitted by NYSDEC
 - Discharged to sanitary sewers
- Repair/replace storm drain receiver and catch basin receiver grates as necessary.

Annual Compliance Requirements

Stormwater Management Officer

Implement the catch basin cleaning program according to the developed schedule.

Evaluate the catch basin cleaning program to identify improvements and/or modifications.

Maintain/update as necessary an inventory of all municipally owned infrastructures – it is essential to include underground infrastructure (i.e. septic systems, UST's, oil/water separators, catch basins/sewers, etc.)

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.12 Construction and Land Disturbance

Description / Methodology

- Comply with the requirements of the construction and post-construction minimum control measures listed previously.
- Provide education material and training opportunities to the municipal work crews to inform them of the local, state, and/or federal regulations that will impact their projects.
- Plan the construction and/or land clearing activities so that soil is not exposed for long periods of time
- Minimize compaction of soils
- Minimize impervious cover
- Maximize opportunities for infiltration
- Install sediment control devices before disturbing soil
- Limit grading to small areas

- Stabilize site to protect against sediment runoff
- Protect against sediment flowing into storm drains
- Maintain native vegetation (especially near waterways)
- Install sediment barriers on slopes or divert stormwater
- Annual Compliance Requirements

City of Kingston

Provide additional training as necessary to the municipal work crews.

Stormwater Management Officer

Incorporate BMPs into the work activities of the work crews during land disturbance activities.

Monitor work activities to verify compliance with land disturbance requirements.

Review new construction design plans to incorporate PP/GH BMPs so as to avoid all deleterious effects to stormwater runoff (prior to construction).

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

Refer to/comply with the SPDES General Permit For Stormwater Discharges from Construction Activities (GP-0-10-002)

Refer to/comply with Sections 4 and 5 of this document.

6.4.13 Hydrologic Habitat Modification

Description / Methodology

Develop requirements for the municipal work crews to abide by during hydrologic habitat modification such as stream and ditch cleaning, and wetland disturbance, and provide training to the municipal work crews regarding those requirements.

Identify any potential habitat modification to the NYSDEC and USACOE through their Joint Application for Permit Program.

Comply with all requirements of the NYSDEC and USACOE permits for work within freshwater wetlands and streams permits.

Comply with the construction and post-construction requirements within the stormwater regulations.

Annual Compliance Requirements

City of Kingston

Provide additional training as necessary to the municipal work crews.

Stormwater Management Officer

Provide the NYSDEC and USACOE with the required information in the Joint Application for Permit to obtain approvals prior to proceeding.

Comply with all requirements of the NYSDEC and USACOE permits.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.14 Street Cleaning and Maintenance

Description / Methodology

- Sweeping of streets and roadways in order to reduce the amount of sediment and associated pollutants discharged to the MS4 from roadways.
- Identify the type of roadways that can be swept to remove sediment and other pollutants.
- Schedule and implement street sweeping of identified roadways.
- Perform operations such as paving in dry weather only.

- Maintain records of streets that have been cleaned.
- Adjust sweeping schedules according to program needs.
- Prior to road reconstruction, consider/evaluate the use of “shouldered roads” instead of “curbed roads”.
- Maintain roadside vegetation; select plants/trees that can withstand the action of road salt. Direct the runoff to these areas.

Annual Compliance Requirements

Stormwater Management Officer

- Implement street sweeping in accordance with the identified schedule.
- Adjust sweeping schedules according to program needs.
- Maintain/update as necessary an inventory of all municipally owned infrastructure – it is essential to include underground infrastructure (i.e. septic systems, UST’s, oil/water separators, catch basins/sewers, etc.)

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.15 Marina Operations

Description / Methodology

Provide for proper operation and maintenance of marinas in order to mitigate the contamination of the stormwater system and local waterbodies.

Minimize the impact of the following items:

- Liquids associated with boat maintenance products (oils, fuels, antifreeze, wood preservatives, etc.) and particulate matter (i.e. boat bottom paint from hull sanding)
- Contaminated bilge water
- Sanitary sewage from wastewater holding tanks
- Construct and maintain pump out stations (for sanitary wastes)
- Build and maintain fish cleaning stations
- Stabilize shoreline
- Designate locations for boat maintenance away from the water
- Minimize impervious areas – install vegetated buffer strips (i.e. grass, shrubs)
- Provide spill clean up kits at fueling stations, replace as needed
- Provide covered trash receptacles
- Educate (posters, signage) boaters and other marina users of potential problems
- Identify areas of runoff that lack vegetation
- Regularly check fueling areas, maintenance areas for spills, other potential sources of pollution
- Regularly check (and empty as necessary) fish cleaning stations, sewage pump out stations, trash cans

Annual Compliance Requirements

Stormwater Management Officer

- Provide capital improvements as necessary to implement the selected BMPs.
- Provide operation and maintenance for each selected BMP.
- Review new marina site(s) and operations to incorporate any new BMPs .

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.16 Pest Control

Description / Methodology

Reduce the discharge of pesticides from municipal facilities as they may harm aquatic life and may contaminate local water bodies and sediment.

Develop an inventory of areas designated for pesticide application including the following:

- Area of application
- Type of pesticide applied
- Purpose of application
- Prepare a pesticide application schedule.
- Comply with local, state, and federal regulations associated with pesticide application, e.g. licensing regulations.
- Purchase only enough pesticides necessary for one year – store properly to avoid waste generation (spills, leaks, product deterioration).
- Minimize/eliminate pesticide application, use lowest toxicity pesticides
- Track the volume and type of pesticide applied at each location.
- Do not apply pesticides immediately prior to or during rain events
- Ensure that employees are properly trained and certified in pesticide application techniques and safety
- Develop zero input, low input lawns
- Eliminate food, water, and shelter for pests
- Adopt integrated pest management (IPM) techniques
- Adopt alternatives to pesticides options (use physical, mechanical, or biological controls)

Annual Compliance Requirements

Stormwater Management Officer

Review pesticide application at all facilities/lands and incorporate new methodologies for application, or determine if pesticide application can be discontinued at sites.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.17 Pet Waste Collection

Description / Methodology

Minimize the potential for pet waste to impact stormwater runoff.

Post signage which dissuades the public from leaving excrement from their pets on public property.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.18 Septic System Management

Description / Methodology

- Prevent improperly treated wastewaters from septic systems from impacting municipal stormwater systems and local waterbodies.
- Divert stormwater runoff (i.e. from roof drains) away from septic system
- Divert groundwater (sump pump) discharges away from septic system
- Locate swimming pools away from the septic system (at least 20' from the septic tank, at least 35'

from the closest edge of the leach field or sand filter system)

- Prevent problems caused by vegetation - growth of woody plants on the system
- Prevent hydraulic overloading - “Spread out” the use of devices which use large volumes of water across the entire day – clothes washing, dish washing, and bathing. Repair leaky fixtures.
- Minimize water usage by using flow restrictors on potable water distribution devices (i.e. shower heads, water faucets)

Annual Compliance Requirements

Stormwater Management Officer

Determine the interval for pumping out each municipal septic tank.

Maintain/update as necessary an inventory of all municipally owned septic systems and corresponding dates of service for each.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.19 Alternative Discharge Options for Chlorinated Water

Description / Methodology

Prevent the discharge of chlorinated water from impacting municipal stormwater systems and local waterbodies.

Dechlorinate pool water before any discharge, be it over land or to the sanitary sewer, or allow the “disinfectant” to dissipate with sunlight, use, etc. prior to discharge.

Use ultraviolet radiation or osmosis to disinfect water/wastewater.

Backwash water should be discharged to the sanitary sewer, if available – if not available, discharge water over vegetated areas, not to surface waters

Annual Compliance Requirements

Stormwater Management Officer

Obtain permission from the municipal POTW prior to discharging any chlorinated pool waters to a sanitary sewer system

Identify opportunities to change current maintenance practices to incorporate opportunities to abate the potential for stormwater contamination (i.e. change from disinfection with chlorine compounds to disinfection with osmosis, UV light).

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.4.20 Road Kill/Composting Operations

Description / Methodology

Prevent decaying road kill/composting operations from impacting municipal stormwater systems and local waterbodies.

Establish compost pile/windrow on a well drained, impervious surface that has minimal slope – segregate from other operations.

Identify the proper types of carcasses (typically, deer) that should be composted.

Locate compost piles at least 200 ft. away from receiving waters or wetlands.

Prevent access by vermin/scavengers – erect barriers (i.e. snow fence) around pile.

Annual Compliance Requirements

Stormwater Management Officer

Review operations to ensure that stormwater runoff is not being contaminated from current operations.

Implement new procedures, Best Management Practices as necessary.

Additional Information / Resources

Refer to the Guidance Documents and Inspection Checklists regarding Pollution Prevention/Good Housekeeping for Municipal Operations.

6.5 Required Reporting

At a minimum, the permittee shall report on the items below:

Indicate the municipal operations and facilities that the pollution prevention and good housekeeping program assessed;

Describe, if not done so already, the management practices, policies and procedures that have been developed, modified, and / or implemented and report, at a minimum, on the items below that the permittee's pollution prevention and good housekeeping program addressed during the reporting year:

- acres of parking lot swept;
- miles of street swept;
- number of catch basins inspected and, where necessary, cleaned;
- post-construction control stormwater management practices inspected and where necessary, cleaned;
- pounds of phosphorus applied in chemical fertilizer
- pounds of nitrogen applied in chemical fertilizer; and
- pounds of pesticides / herbicides applied as pure product.

Staff training events and number of staff trained; and

Report on effectiveness of program, BMP and measurable goal assessment. If the pollution prevention and good housekeeping program addresses other operations than what is listed above in Section 6.2.a.ii, the permittee shall report on items that will demonstrate program effectiveness.

General Practices for the Pollution Prevention/Good Housekeeping Program

Assess/identify modified (or new) municipal operations to identify changes in operations that affect stormwater runoff, and develop/implement new BMPs or modify existing BMPs to prevent the discharge of pollutants from municipal operations.

Adjust monitoring and maintenance programs as necessary.

Incorporate costs for stormwater permit compliance (i.e. necessary infrastructure upgrades/capital improvements) when developing annual budgets.